

been eliminated. Early recognition and effective treatment with CPAP therapy will reduce recurrent presentations and help with complete symptomatic cessation of transient neurological manifestations.

2982

### CIRCADIAN AND MULTI-DAY CYCLES IN HEART RATES IN PATIENTS RECEIVING VAGUS NERVE STIMULATION FOR DRUG-RESISTANT EPILEPSY

<sup>1,2</sup>Yufei Xu\*, <sup>3</sup>Matthew Gutman, <sup>3</sup>Martin Hunn, <sup>4</sup>James King, <sup>1,2</sup>Patrick Kwan, <sup>1,2</sup>Terry O'Brien, <sup>1,2</sup>Hugh Simpson. <sup>1</sup>Department of Neurology, Alfred Health, Melbourne, VIC, Australia; <sup>2</sup>Neuroscience, Monash University, Melbourne, VIC, Australia; <sup>3</sup>Neurosurgery, Alfred Health, Melbourne, VIC, Australia; <sup>4</sup>Neurosurgery, Royal Melbourne Hospital, Parkville, VIC, Australia

10.1136/bmjno-2024-ANZAN.26

**Background** Drug-resistant epilepsy is a common, disabling, and life-threatening disease. Vagus nerve stimulation (VNS) is a valuable tool in its treatment. Cyclic patterns in seizures have recently gained considerable attention, in particular the idea of using these cycles to tailor neurostimulation therapies. Modern VNS devices detect and respond to rises in heart rate, yet there has been minimal investigation into the presence of cycles in heart rate detections in VNS.

**Methods** Tachycardia detection data from SenTiva M1000 and Aspire M106 VNS devices were analysed in 42 consecutive outpatients. One patient was excluded due to insufficient data. Cycles in tachycardia detections were identified using spectral analysis from both hourly and daily detection counts.

**Results** Cycles in tachycardia detections were present in almost all subjects (39/41). Circadian (24hr) rhythm was the most common cycle, present in 86.8% of subjects with hourly detection counts recorded (33/38). Other common ultradian (<24 hour) cycles were 12 hours and 8 hours, present in 44.7% (17/38) and 28.9% (11/38) of subjects, respectively. Multi-day (infradian) cycles were identified in 26/29 subjects with analysable daily counts (89.7%). These cycle lengths were variable, but the most common were: approximately monthly (24 - 32 days) (48.2%, 14/29), weekly (6–8 days) (27.6%, 8/29), and bi-monthly (58 - 60 days) (20.7%, 6/29).

**Conclusion** We show for the first time that multi-day cycles in tachycardia detections can be demonstrated using standard implantable VNS systems. The pattern of these cycles could potentially be used to provide better tailored epilepsy treatment and VNS programming.

2984

### TREATMENT MONITORING AND VACCINE COMPLIANCE IN PEOPLE WITH MS(PWMS): SURVEILLANCE THROUGH A TEXT-BASED QUESTIONNAIRE

Jenny Han\*, Jeanette Lechner-Scott. John Hunter Hospital, New Lambton Heights, NSW, Australia

10.1136/bmjno-2024-ANZAN.27

**Background/Objectives** Treatment monitoring, vaccine compliance and barriers to vaccination are important when treating pwMS with immune suppressive agents. A text message-based questionnaire was designed to educate and audit treatment monitoring and vaccination compliance of patients on commonly used disease modifying therapy (cDMT).

**Method** Patients known to the John Hunter MS Clinic on Fingolimod, Cladribine, Natalizumab, Ofatumumab and

Ocrelizumab were messaged a questionnaire link. Treatment monitoring included pathology and malignancy surveillance. Vaccination compliance for COVID-19, Influenza, Pneumococcus and Varicella were reviewed along with reasons for non-compliance.

**Results** There were 321/487 (65.9%) respondents over a 6-month period. Respondents indicated 37% were on Ocrelizumab, 21% Cladribine, 17% Natalizumab, 15% Ofatumumab, and 10% on Fingolimod. Median age was 46 (range 16–74) with 83% women.

Pathology results were available to the clinic in 97% of respondents compared with 60% having correct recollection of having a full blood count performed in the past 12 months. Skin checks were performed in the last two years in 53% of respondents. Most women (73%) had a pap smear and breast check in the past 5 years.

Vaccination compliance was 56% for COVID-19, 66% for annual influenza, 53% for Pneumococcus and 44% for Herpes Zoster and 7.5 % across all four. The top five reasons for non-compliance were categorised as patients Did not know (47.5%), Unsure (41.7%), Misinformed (10.1%), Price (7.2%), lack of GP access (4.3%).

**Conclusion** Malignancy surveillance on cDMT and vaccination compliance could be improved by raising patient awareness through inexpensive, personalised exposure such as text messaging.

2985

### UNILATERAL PRIMARY ANGIITIS OF THE CENTRAL NERVOUS SYSTEM (PACNS) ASSOCIATED WITH POLYDRUG USE

Jenny Han\*, Jeanette Lechner-Scott. John Hunter Hospital, New Lambton Heights, NSW, Australia

10.1136/bmjno-2024-ANZAN.28

We present a case report of unilateral PACNS in the context of polydrug use that posed diagnostic and therapeutic challenges.

A 36-year-old male presents with progressive short-term memory loss over the past year. He later disclosed that this was in the context of non-intravenous NMDA, amphetamines, cocaine and magic mushroom use. Initial magnetic resonance imaging (MRI) revealed a solitary right periventricular T2/FLAIR hyperintense lesion without diffusion restriction. Cerebrospinal fluid did not yield definitive infective cause or oligoclonal bands. Neurological and cognitive assessment were normal. A 6-month progress MRI demonstrated progression leading to his first brain biopsy, showing vasculitis features and no B-cell predominance. He represented two weeks later with a generalised seizure and MRI showing further progression of size and number of lesions in the right hemisphere while continuing polydrug use. Computer Tomography and FDG-PET were negative for malignancy screening, MR and CT angiograms were not suggestive of vasculopathy. Repeat CSF was unremarkable. A second brain biopsy was again suggestive of vasculitis, confirmed by the presence of granuloma. The patient was given a second pulse of methyl prednisone and commenced on cyclophosphamide for presumed diagnosis of PACNS after exclusion of even rare possible infections resulting in clinical and radiological improvement.

To date, there have been no reported unilateral PACNS associated with drug use. The main differential diagnosis